REMR MATERIAL DATA SHEET CM-PC-2.7

FasTrak Patch

1. NAME

FasTrak Patch

2. MANUFACTURER

Cormix Construction Chemicals
P.O. Box 190970
Dallas, TX 75219-0970
Telephone: 1-800-959-6589

3. DESCRIPTION

FasTrak Patch is a prepackaged cementitious mortar patching material that provides a rapid-setting, high-strength product that can be opened to traffic within 1 hr.

4. APPLICABLE SPECIFICATION

ASTM C 928, "Standard Specification for Packaged, Dry, Rapid-Hardening Cementitious Materials for Concrete Repair."

5. USES

FasTrak Patch provides very rapid, permanent patching of concrete pavements, floors, bridge decks, and other applications requiring early resumption of traffic or use.

6. MANUFACTURER'S GUIDANCE FOR APPLICATION

Properties	Test Method	Test Results
Initial Set	ASTM C 266	15 - 20 min
Final Set	ASTM C 266	20 - 25 min
Compressive Strength	ASTM C 109	1 hr - 2,500-3,000 psi 3 hr - 7,000-9,000 psi 3 days - 9,000-10,000 psi

The manufacturer states that FasTrak Patch is virtually volume stable from time of placement.

7. MANUFACTURER'S GUIDANCE FOR APPLICATION

Preparation: The base slab on which the patch is to be placed should be clean and saturated with clean water, preferably by ponding. Just prior to patching, the water should be removed and the surface dried with clean rags or compressive air, free of oil and other lubricants and leaving only a damp film. All concrete surfaces to come in contact with the patch should be free of grease, oil, laitance, and other debris. Square edges by chipping or saw-cutting. Do not featheredge. All concrete of poor quality that is in contact with reinforcing steel should be removed. The minimum depth of clearance under steel shall be 3/4 in. (19 mm). Remove rust from exposed reinforcing steel by brushing or sandblasting prior to repairing with FasTrak Patch. Do not use bonding agents on steel. Have all tools and materials as near work areas as possible to permit rapid and continuous placement of FasTrak Patch.

Mixing of the material: Use of a mortar mixer is recommended. Prior to mixing the first batch of FasTrak Patch, wash out the mixer and determine the number of bags to be mixed at one time. Mix only the amount of material that can be placed in approximately 10 min. If the area to be patched is greater than 1 in. (25 mm), extend the material with clean, hard, well-graded 3/8-in. (9-mm) aggregate. Do not use lightweight aggregate. Total mixing water per 50 lb (23 kg) shall not be more than 1-1/3 gal (5 L). Put all of the required water into the mixer; than add the material slowly into the operating mixer (being careful not be overload to the point of stalling). Mix the material approximately 2 to 3 min to uniform consistency. When adding pea gravel, add approximately one 5-gal (19-L) bucket of 3/8-in. (9-mm) aggregate for every two 50-lb (23-kg) bags of the material. Continue to mix until the aggregate is thoroughly dispersed throughout the material.

Placement of the material: Place the mixed material immediately into a thoroughly dampened area. Place from one side to the other, working the material into the sides and bottom of the patch area to assist in satisfactory bonding. Do not featheredge. Screed and level to the proper elevation of existing concrete. Trowel with metal tools only. Seal edges and sawcuts. Under no circumstances should FasTrak Patch be retempered, using water or other additives.

Standard curing conditions: As soon as possible without marring, begin curing with water. Saturated burlap may be used. Maintain a wet surface for a minimum of 1 hr. Immediately after water curing, allow the surface to dry, at which time a curing compound meeting the requirements of ASTM C 309 may be applied.

Hot weather patching: When the temperature is above 80 °F (27 °C), special precautions should be taken. Store FasTrak Patch in a cool, shaded location until time of use. Use chilled mixing water as close to 33 °F as possible. This can be easily accomplished by placing a block of ice in a 55-gal drum of water. At the time of placement, the material should be 80 °F or less. Locate the mortar mixer in a shaded area as close to the patching site as possible. Prior to mixing, cool the mixer with chilled water.

Cool weather patching: Because the material tends to set up and gain strength more slowly in cold weather, certain modifications to the basic procedures are recommended:

a. Store the material in a warm building 48 to 72 hr prior to patching.

b. Heat the mixing water to approximately 85 °F (29 °C).

c. The mixer should be warmed with hot water prior to mixing the first batch.

8. CORPS OF ENGINEERS' EVALUATION

Properties	Test Methods	Test Results
Compressive strength	ASTM C 109	1 hr --------- 2,860 psi 1-1/2 hr----- 3,680 psi 24 hr---------- 7,650 psi 7 days------- 8,200 psi
Flexural strength	ASTM C 78	28 days------- 645 psi >3,500 psi
Drying shrinkage	ASTM C 157	28 days------- 0.042%
Scaling resistance to deicing chemicals	ASTM C 672	The test specimens were given a rating of 4 (moderate to severe scaling) after 25 cycles

9. ENVIRONMENTAL CONSIDERATIONS

Reasonable caution should guide the preparation, repair, and cleanup phases of sealant activities involving potentially hazardous and toxic chemicals substances. Manufacturers' recommendations to protect occupational health and environmental quality should be carefully followed. Material safety data sheets should be obtained from the manufacturers of such materials. In cases where the effects of a chemical substance on occupational health or environmental quality are unknown, chemical substances should be treated as potentially hazardous toxic materials.

10. AVAILABILITY AND COST

Information concerning the availability and cost of FasTrak Patch can be obtained by writing the manufacturer at the address given in item 2 or calling 1-800-959-6589.

11. TECHNICAL SERVICES

Information on technical services can be obtained by writing the manufacturer at the address in item 2 or by calling 1-800-959-6589.